

## **RAW SEQUENCE LISTING**

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Application Serial Number: 10/583,218  
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/583,218

DATE: 02/28/2007

TIME: 14:17:47

Input Set : N:\efs\02\_28\_07\10583218\_efs\seq-list.txt  
 Output Set: N:\CRF4\02282007\J583218.raw

3 <110> APPLICANT: Applied Research Systems ARS Holding N.V.  
 5 <120> TITLE OF INVENTION: NOVEL CC-CHEMOKINE BINDING TICK PROTEINS  
 7 <130> FILE REFERENCE: WO956  
**C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/583,218**  
**C--> 9 <141> CURRENT FILING DATE: 2006-06-16**  
 9 <150> PRIOR APPLICATION NUMBER: EP03104973.7  
 10 <151> PRIOR FILING DATE: 2003-12-24  
 12 <160> NUMBER OF SEQ ID NOS: 10  
 14 <170> SOFTWARE: PatentIn version 3.2  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 744  
 18 <212> TYPE: DNA  
 19 <213> ORGANISM: ectromelia virus  
 21 <400> SEQUENCE: 1  
 22 atgaaaacaat atatcgctt ggcatgcata tgcctggcgg cagctgctat ccctaccagt 60  
 24 cttcagcaat cattcgcatc ctcgtgtacg gaagaagaaa acaaccatca tatggaaatc 120  
 26 gatgttatta tcaaaggcac caagcaagac caaacaccga ctaatgataa gatttgtcaa 180  
 28 tcagtaaccg aagttacaga gtctgaagac gatgggtat ccgaagaagt cgtaaaagga 240  
 30 gatcccacca cttattacac tgcgtcggt ggaggtctga gaatgaactt tggattcacc 300  
 32 aaatgtcctc agattaaatc catctcagaa tccgctgatg gaaacacagt gaatgctcgg 360  
 34 ttgtcttagcg tctctccaat gtacggcatt gaatctccag ccatcactca tgaagaagct 420  
 36 cttgctatga tcaacgactg tgcgggtgtct atcaaatatca aatgttagtga agaagagaaa 480  
 38 gacagcaaca tcaagaccca tccagttactc gggcttaaca tctctcataa gaaagtgagg 540  
 40 tacgaagata tcatacggttc aacgatcgtc gatataaaat gtgtcaagga tctagagttt 600  
 42 agcgttcgta tcggagacat gtgcaaggaa gcatctgaac ttgaagtcaa ggatggattc 660  
 44 aagtatatcg acggatcggt atctgaaggt gcaaccgatg atacttcact catcgattca 720  
 46 acaaaaactca aacgcgtgtt ctga 744  
 49 <210> SEQ ID NO: 2  
 50 <211> LENGTH: 247  
 51 <212> TYPE: PRT  
 52 <213> ORGANISM: ectromelia virus  
 54 <400> SEQUENCE: 2  
 56 Met Lys Gln Tyr Ile Val Leu Ala Cys Ile Cys Leu Ala Ala Ala Ala  
 57 1 5 10 15  
 60 Ile Pro Thr Ser Leu Gln Gln Ser Phe Ala Ser Ser Cys Thr Glu Glu  
 61 20 25 30  
 64 Glu Asn Asn His His Met Gly Ile Asp Val Ile Ile Lys Val Thr Lys  
 65 35 40 45  
 68 Gln Asp Gln Thr Pro Thr Asn Asp Lys Ile Cys Gln Ser Val Thr Glu  
 69 50 55 60  
 72 Val Thr Glu Ser Glu Asp Asp Gly Val Ser Glu Glu Val Val Lys Gly  
 73 65 70 75 80  
 76 Asp Pro Thr Thr Tyr Tyr Thr Val Val Gly Gly Leu Arg Met Asn

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**Output Set: N:\CRF4\02282007\J583218.raw**

77	85	90	95	
80	Phe Gly Phe Thr Lys Cys Pro Gln Ile Lys Ser Ile Ser Glu Ser Ala			
81	100	105	110	
84	Asp Gly Asn Thr Val Asn Ala Arg Leu Ser Ser Val Ser Pro Met Tyr			
85	115	120	125	
88	Gly Ile Glu Ser Pro Ala Ile Thr His Glu Glu Ala Leu Ala Met Ile			
89	130	135	140	
92	Asn Asp Cys Ala Val Ser Ile Asn Ile Lys Cys Ser Glu Glu Glu Lys			
93	145	150	155	160
96	Asp Ser Asn Ile Lys Thr His Pro Val Leu Gly Ser Asn Ile Ser His			
97	165	170	175	
100	Lys Lys Val Arg Tyr Glu Asp Ile Ile Gly Ser Thr Ile Val Asp Ile			
101	180	185	190	
104	Lys Cys Val Lys Asp Leu Glu Phe Ser Val Arg Ile Gly Asp Met Cys			
105	195	200	205	
108	Lys Glu Ala Ser Glu Leu Glu Val Lys Asp Gly Phe Lys Tyr Ile Asp			
109	210	215	220	
112	Gly Ser Val Ser Glu Gly Ala Thr Asp Asp Thr Ser Leu Ile Asp Ser			
113	225	230	235	240
116	Thr Lys Leu Lys Ala Cys Val			
117	245			
120	<210> SEQ ID NO: 3			
121	<211> LENGTH: 585			
122	<212> TYPE: DNA			
123	<213> ORGANISM: Rhipicephalus sanguineus			
125	<400> SEQUENCE: 3			
126	ggccattacg gcccggggtc cttgcgcatt cgttagagc agcagctaa gtcttcgaag	60		
128	atgcgcactt tcggggcttc tctttcggtt ctcctcgca ttatgtcgct ttactgtgac	120		
130	gtccaaagagc gccccatac ttacgtgacc aaaaatgtga cggtcgaaaa cggtcgtgc	180		
132	gtgtttgaac gcaacgtcat tccggatggt gaaaccaaag cactgaacag cccatgcgtc	240		
134	atttccacat gctatgcagc tgaccgtaaa gtgaactcga ctctctgccc gaacttcgga	300		
136	gttgccggagg gctgcgtatgt ggagtggacc cccgatggtg aataccgaa ctgtgcggc	360		
138	aagcatgtgt gcccacggc ccctgttaact tcttaatcgc atcacatctg cgaaaaatgaa	420		
140	acgtcgagac attcttcttt atgccttaag aaattaaact gcaacgtccg caaaaataca	480		
142	tccccgcttc aaatacgaac aaaatgcagg atcaaatgct attaggtttc atgctgagtg	540		
144	caagctaaaa taaacaactg aatcgcgtt taaaaaaaaaaaaaaa	585		
147	<210> SEQ ID NO: 4			
148	<211> LENGTH: 111			
149	<212> TYPE: PRT			
150	<213> ORGANISM: Rhipicephalus sanguineus			
152	<400> SEQUENCE: 4			
154	Met Arg Thr Phe Gly Ala Ser Leu Phe Val Leu Leu Ala Ile Ser Val			
155	1	5	10	15
158	Ala Tyr Cys Asp Val Gln Glu Arg Gly His Thr Tyr Val Thr Lys Asn			
159	20	25	30	
162	Val Thr Val Glu Asn Gly Ala Cys Val Phe Glu Arg Asn Val Ile Pro			
163	35	40	45	
166	Asp Gly Glu Thr Lys Ala Leu Asn Ser Pro Cys Val Ile Ser Thr Cys			
167	50	55	60	

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170 Tyr Ala Ala Asp Arg Lys Val Asn Ser Thr Leu Cys Pro Asn Phe Gly  
 171 65 70 75 80  
 174 Val Ala Glu Gly Cys His Val Glu Trp Thr Pro Asp Gly Glu Tyr Pro  
 175 85 90 95  
 178 Asn Cys Cys Pro Lys His Val Cys Pro Thr Ala Pro Val Thr Ser  
 179 100 105 110  
 182 <210> SEQ ID NO: 5  
 183 <211> LENGTH: 420  
 184 <212> TYPE: DNA  
 185 <213> ORGANISM: Rhipicephalus sanguineus  
 187 <400> SEQUENCE: 5  
 188 gacgtccaag agcgccgcca tacttacgtg accaaaaatg tgacggtcga aaacggtgcc 60  
 190 tgcgtgtttg aacgcaacgt cattccggat ggtgaaacca aagcactgaa cagcccatgc 120  
 192 gtcatttcca catgctatgc agctgaccgt aaagtgaact cgactctcg cccgaacttc 180  
 194 ggagttgcgg agggctgcca tgtggagtgg acccccgtg gtgaataccc gaactgctgc 240  
 196 ccgaagcatg tgtgcctac gcgccctgtt acttcttaat cgcacatcgat ctgcggaaaat 300  
 198 gaaacgtcga gacattcttc ttatgcctt aagaaattaa actgcaacgt ccgcggaaaat 360  
 200 acatccccgc ttcaaatacg aacaaaatgc aggatcaaact gctatttaggt ttcatgctga 420  
 203 <210> SEQ ID NO: 6  
 204 <211> LENGTH: 92  
 205 <212> TYPE: PRT  
 206 <213> ORGANISM: Rhipicephalus sanguineus  
 208 <400> SEQUENCE: 6  
 210 Asp Val Gln Glu Arg Gly His Thr Tyr Val Thr Lys Asn Val Thr Val  
 211 1 5 10 15  
 214 Glu Asn Gly Ala Cys Val Phe Glu Arg Asn Val Ile Pro Asp Gly Glu  
 215 20 25 30  
 218 Thr Lys Ala Leu Asn Ser Pro Cys Val Ile Ser Thr Cys Tyr Ala Ala  
 219 35 40 45  
 222 Asp Arg Lys Val Asn Ser Thr Leu Cys Pro Asn Phe Gly Val Ala Glu  
 223 50 55 60  
 226 Gly Cys His Val Glu Trp Thr Pro Asp Gly Glu Tyr Pro Asn Cys Cys  
 227 65 70 75 80  
 230 Pro Lys His Val Cys Pro Thr Ala Pro Val Thr Ser  
 231 85 90  
 234 <210> SEQ ID NO: 7  
 235 <211> LENGTH: 515  
 236 <212> TYPE: DNA  
 237 <213> ORGANISM: Amblyomma variegatum  
 239 <400> SEQUENCE: 7  
 240 gttgagctag tgcaagctca cttttacgtc ctgcttcggg gcaagatcac acacccaaaa 60  
 242 tgcgtgcgtc cggtgttta gcctgtgtcg tagtcagtgt tgccgttagtc atccgcgaca 120  
 244 tccaggaaca tggccactcc tacttgaaga ggaatgtgac tatagagaac ggtgcctgca 180  
 246 tctatgagcg caaacacactt cctgatggtg aaaccaaggc actccacagac ccctgcgtca 240  
 248 ttgcaacctg ctacgctgaa aggcgcgaag tgaatgccac cctgtgccca aacttcgggtg 300  
 250 tggatcctgg ttgttagggtg cagtggaccc ccgacggcat ctatccagaa tgctgcccga 360  
 252 aacaagtgtg ccatggcaca aactgagtcg aatgcacatc ttttgcataat gcctgtttcg 420  
 254 agctgccacg tccaaataca ctgatgactc caagttactc agccggaaaa ttcactttcc 480  
 256 gtaaacaggt ttaagattca ataaacattt ctgaa 515

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Input Set : N:\efs\02\_28\_07\10583218\_efs\seq-list.txt  
Output Set: N:\CRF4\02282007\J583218.raw

259 <210> SEQ ID NO: 8  
 260 <211> LENGTH: 108  
 261 <212> TYPE: PRT  
 262 <213> ORGANISM: Amblyomma variegatum  
 264 <400> SEQUENCE: 8  
 266 Met Arg Ala Leu Val Ala Leu Ala Cys Val Val Val Ser Val Ala Val  
 267 1               5               10               15  
 270 Val Ile Gly Asp Ile Gln Glu His Gly His Ser Tyr Leu Lys Arg Asn  
 271               20               25               30  
 274 Val Thr Ile Glu Asn Gly Ala Cys Ile Tyr Glu Arg Asn Thr Leu Pro  
 275               35               40               45  
 278 Asp Gly Glu Thr Lys Ala Leu His Asp Pro Cys Val Ile Ala Thr Cys  
 279               50               55               60  
 282 Tyr Ala Glu Arg Arg Glu Val Asn Ala Thr Leu Cys Pro Asn Phe Gly  
 283 65               70               75               80  
 286 Val Asp Pro Gly Cys Arg Val Gln Trp Thr Pro Asp Gly Ile Tyr Pro  
 287               85               90               95  
 290 Glu Cys Cys Pro Lys Gln Val Cys Asp Gly Thr Asn  
 291               100              105  
 294 <210> SEQ ID NO: 9  
 295 <211> LENGTH: 396  
 296 <212> TYPE: DNA  
 297 <213> ORGANISM: Ixodes scapularis  
 299 <400> SEQUENCE: 9  
 300 atgagggtcaa tcgttctatg ggctctgatc gccttggag gtgtgccact tctcatggga     60  
 302 gccgctaatt aaagccaccc ttatggagtt tcatttaata acggtacatg tacgtaccga     120  
 304 aatataacgc tgagagatgg agactctgaa cctttcaat acccatgtga atattggaaat     180  
 306 tgcaatgtta cagcaagaac actaactatt gaggggtgcg gtgttccacg atacggaagt     240  
 308 tgcctgtacg tgcacaattta taatttctac tggcctcttt gctgtcgcat gagtcgtctc     300  
 310 tggtaaaaca attaactaat ttaccttcac ttctatcaga acactttgct ggtaaataaaa     360  
 312 aaaagaaaaac aacaaaaaaaaaaaaaaa aaaaaaaaaa aaaaaaaa     396  
 315 <210> SEQ ID NO: 10  
 316 <211> LENGTH: 101  
 317 <212> TYPE: PRT  
 318 <213> ORGANISM: Ixodes scapularis  
 320 <400> SEQUENCE: 10  
 322 Met Arg Ser Ile Val Leu Trp Ala Leu Ile Ala Leu Gly Gly Val Pro  
 323 1               5               10               15  
 326 Leu Leu Met Gly Ala Ala Asn Gln Ser His Pro Tyr Gly Val Ser Phe  
 327               20               25               30  
 330 Asn Asn Gly Thr Cys Thr Tyr Arg Asn Ile Thr Leu Arg Asp Gly Asp  
 331               35               40               45  
 334 Ser Glu Pro Phe Gln Tyr Pro Cys Glu Tyr Trp Asn Cys Asn Val Thr  
 335               50               55               60  
 338 Ala Arg Thr Leu Thr Ile Glu Gly Cys Gly Val Pro Arg Tyr Gly Ser  
 339 65               70               75               80  
 342 Cys Leu Tyr Val His Asn Tyr Asn Phe Tyr Trp Pro Leu Cys Cys Arg  
 343               85               90               95  
 346 Met Ser Arg Leu Cys

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Input Set : N:\efs\02\_28\_07\10583218\_efs\seq-list.txt  
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347

100

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/583,218

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L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date